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ON ABNORMAL SOUNDS IN DIFFERENT PARTS OF THE HUMAN BODY.

FROM RECENT LECTURES BY F. MAGENDIE.

[See page 186.]

THE sounds which emanate from the lungs, both in health and disease, afford, I say, a most important subject of meditation for the physician, chiefly because they are united in the most close and palpable connection with the healthy or pathological conditions of the organ producing them, and, of necessity, in the same proportion connected with the practice of medicine.

The bruits resulting from the passage of air through the organs contained in the cavity of the chest, are in one respect peculiarly worthy of our attention and strict analysis, because the chest, meaning of course thereby the cavity, its contents, the trachea, and larynx, is a perfect musical instrument, suited, in an admirable manner, for the propagation of sound from the interior to the exterior; indeed, I have no doubt whatever, but that by following up or developing the combination of conditions presented by the chest, we might be able to produce a musical instrument, after its model, of the most perfect kind, in the same way as certain optical instruments are said to have been formed after the model of the human eye; but the subject has never been studied in this point of view.

It is scarcely necessary for me to repeat the convincing arguments we have already advanced to prove that in this part of the body, above all others, the development of sound is merely the result of certain physical conditions which a little attention enables us to seize with facility: let us bestow a few moments on the reconsideration of this part of our subject; it will render the comprehension of what I have to say afterwards upon the pathological sounds of the chest, much more easy.

If we examine the chest as a musical instrument, we shall see that the sonorous part is composed of an elastic tube, which for a short way continues its course undivided, but soon breaks up into a multitude of other tubes, dividing and subdividing infinitely until the whole cavity of the chest is filled as it were with the aggregate of those sonorous conduits; the trachea thus fills the office of what is called the *portevent* in instruments à anche, for I regard the analogy between the organ of the human voice and instruments à anche, or organ instruments, as most strict and well demonstrated. I cannot agree with my learned confrere and friend, M. Savart, who proposes to compare the organ of the voice to the little whistle (*sifflet*) which hunters use when they desire to imitate the voice of certain birds, and which is composed of a little hemispherical base, a

few lines in diameter, and pierced on either side by two narrow slits, through which the air is made to pass.

The facts advanced by M. Savart are most ingenious, but I cannot agree with him in comparing the larynx to a bird-call (*reclame*) ; on the contrary, the analogy, or, more properly speaking, the resemblance, between the human organ of voice, taken in its whole extent, and instruments à anche, appears to me most evident. Thus I regard the human voice as composed of four distinct parts : and remark how closely the uses of these several parts correspond with those of an instrument à anche. The first is the reservoir of air, formed by the pulmonary vesicles and branches of the tracheal artery. Here it is important to notice how the air in the reservoir is not contained (as is the case in almost all musical instruments) in a single sac or compartment, but is distributed throughout a multitude of little bags and tubes, where it may acquire various physical properties which no doubt have a considerable influence in modifying the quality of the sounds produced. Thus it is not a pure cold air, varying in temperature, &c. as in the reservoir of an organ, for example ; on the contrary the temperature of the reservoir in the human instrument is always fixed ; moreover the air is charged with a certain quantity of humidity resulting from the pulmonary transpiration, and is mixed with a proportion of carbonic acid gas. These peculiarities contribute to give it a great advantage over other instruments of a similar nature.

The reservoir of air in the human organ has also the advantage of being elastic in different ways, another property that modifies its action in a very remarkable manner. The chest, as I have before told you, is composed in great part of elastic tissues ; of curved elastic bones, cartilages, and ligaments, which all concur together in the act of expiration, and, consequently, in the formation of sounds. Besides the parts actually entering into the composition of the chest, we have, below, the diaphragm and abdominal muscles acting with considerable energy, so as to attract or expel the air.

In some of my former lectures I spoke to you at length of the innate elasticity of the lung, and of the various important results derived from that physical condition ; I should now like to consider the elasticity of that organ quite in a different point of view. Let us begin by once more demonstrating this elasticity in the lung, totally separated from all other influences ; here is one which has been removed from the body ; the larynx and trachea remain attached to it ; I now inflate the organ through the trachea ; you see how it is more than doubled in size. When we permit an exit to the air, the lung recovers its original dimensions. Here, Gentlemen, you see an incontestable proof of the elasticity of the lung, for no other influence could have expelled the large quantity of air which we introduced ; you can also, I should think, easily conceive how the current of air passing through a vast number of tubes of different calibres, tubes decreasing infinitely in size, and subdividing at various angles,—you can understand, I say, how the body of air must rub against the parietes of the tubes through which it passes, and thus give rise to the development of sound.

This is actually the case ; in the living body, if you apply your ear

close to the parietes of the chest, you hear most distinctly the respiratory bruit, or, in other words, the sound resulting from the friction of the air against the pulmonary vesicles ; even in the naked lung you can hear the sound of which we speak, though not so well or distinctly, because the lung requires to be covered with the parietes of the thorax, in the same way that certain musical instruments become indistinct, unless their covers be attached to them : however, when I place the end of the stethoscope on the surface of the lung before me, I can make out the respiratory murmur well enough, at each artificial insufflation.

According to the explanation which I have just given to you, the natural respiratory bruit is produced by the friction of the air against the sides of the cells and the extreme bronchial ramifications : hence it follows as a natural consequence, that any affection modifying the condition of those parts, must also modify the nature of the sound resulting from them. Thus, when the cells are obliterated, there should manifestly be an absence of the respiratory murmur, and this experience shows us to be the case. We have every day examples of patients in whom the air is prevented from freely entering and distending the lungs, by various effusions in the cavity of the chest, or by the effect of inflammation which has caused an actual consolidation of the vesicles ; in all these cases we do not hear the bruit respiratoire, but in its place we find a pathological bruit, more or less distinct and loud, the "*soufflet bronchique*," as it is called. This latter must evidently be attributed to the passage of air rubbing against the parietes of a large tube, or one at least possessing certain dimension. The proof is, we never hear it except in cases where the air is prevented from entering freely into the interior of the pulmonary vesicles ; the cause of this bruit is thus well known, and it is easy to give a physical explanation of it. Indeed, even in the healthy condition of the lungs, we have always a phenomenon somewhat analogous to the one just spoken of. If you take a living animal, or a man, and listen attentively to the passage of the air from the upper part of the lung, or from the larynx into the trachea, you will almost always be able to distinguish a particular sound, quite different from the respiratory murmur : it is a dull heavy sound, and arises from the frottement of the air as it enters the trachea, either at its upper or lower extremity : hence, when much exaggerated, it is called "*soufflet tracheale*."

But let us return to the mechanism of the voice. We have already spoken of the reservoir : the three other parts are the *portevent* ; the *anche* itself ; and the *portevoix*. In every instrument à anche we should distinguish two parts whose uses are quite different ; one is the body, or tube, for the transmission of the air ; the other is the true anche, composed in all cases of elastic plates, capable of vibrating rapidly, and forming a narrow slit through which the air is permitted to pass freely, or is arrested at will ; this is the essence of every anche, and the vibration of the elastic plate or plates (as for example the reed of the clarinet) produces the sound.

In the larynx we find an instrument exactly of this description, and of the most perfect kind ; its mechanism is such that the air may enter freely at one moment, and be suddenly and completely arrested at the next ; various cases of sudden death from interrupted respiration attest this action

of the larynx ; the form of the glottis and the two elastic folds which circumscribe it on either side, resemble as closely as possible the slit of certain reed instruments ; the aperture of the glottis is capable of being enlarged or diminished in an immense variety of degrees. If you examine the larynx of a living animal during the production of the voice, as I have done, by making an incision between the os hyoides and the thyroid cartilage, you will obtain a perfect idea of the motions of the glottis, and you will, moreover, see how the varied tones of the human voice (for the structure of the larynx in the dog is sufficiently similar to that of the human subject to allow the assertion) are connected with the variations in the extent of the opening and the quantity of the elastic plate which vibrates ; besides, you may prove, by direct experiment, that whenever the muscles which are destined to regulate the motions of the glottis cease to work with proper energy, the voice is lost.

The human voice, then, is certainly *an anche*, but one infinitely superior to any that the art of man has, or probably ever will produce ; for the essential part of the instrument is composed of a double elastic plate, vibrating under a thousand changes, and capable, in consequence, of giving rise to infinite modifications of sound ; it is produced by a living mechanism, composed of various contractile bands, each one of which is endowed with a range of contractility which no human art can supply, and thus generating a series of changes in the voice, which human art can never imitate. The larynx produces two kinds of sounds ; one is called the voice, the other is merely the result of the passage of air through the glottis, when the elastic plates no longer act ; it is a mere soufflet, but fortunately is capable of supplying the voice, when this latter has been lost. Thus you all know the case of a distinguished professor in the University, who continued to fill his chair to the satisfaction of the pupils, although he had completely lost the voice, properly so called, and nothing remained but a kind of soufflet, from the air passing through an undeviating orifice. On the second sound or "*bruit vocal*," as physiologists call it, I shall not dwell, because, though presenting many phenomena of the most interesting kind, it is not directly connected with our present subject.

THE THOMSONIAN NATIONAL INFIRMARY.

EXTRACTS FROM DR. WILLIAMS'S SPEECH IN THE MARYLAND HOUSE OF DELEGATES.

WHAT, sir, is the subject now before this house ? It is a bill to incorporate certain men, their associates and successors, to practise the healing art on the Thomsonian system. Is this, sir, the real subject, or is there not something behind the curtain ? Is this merely intended for the benefit of the few individuals who come here and apply for this act of incorporation, and to be confined within the limits of Baltimore ? Do not these men get paid for their medicine and their services ? I am sure they may sell as much medicine as they choose, and obtain as much as they can sell. This, in my humble opinion, is not the principal object. It is, sir, to obtain legislative sanction, to obtain a character, for their

system. And what, sir, will be the consequence of passing this bill ? This legislature will have said, virtually, to the citizens of this State, and to the world, we have examined this subject, and have compared this Thomsonian system with that which is denominated the regular scientific system, to practise which, it is required by the laws of this State that all practitioners shall have pursued a certain course of preparatory studies, and have obtained from competent judges such testimonials of their acquirements and qualifications as will afford some security to community against imposition ; and having thus examined and compared these systems, we are prepared to say that the Thomsonian system is a distinct and perfect one, adequate to meet all the varied indications of disease, and worthy your confidence and patronage. Sir, under the influence of this legislative recommendation, which will be trumpeted forth to the world as such, and, deluded by the boasting and specious but false pretensions of this system, hundreds of our virtuous and really well disposed citizens will be induced to leave those peaceful and innocent employments which they are now pursuing, and to which they are better fitted both by nature and education, to enter upon the practice of the healing art. And, sir, not only these, but numbers who care not what they do, whether evil or good, for gain ; men destitute of intelligence, good sense, or moral worth, who can raise twenty dollars for a Thomsonian book, which is really all that is necessary to qualify them, will take advantage of that credulity and misplaced confidence on the part of a large portion of our citizens, which our legislative proceedings will have produced, and which will preëminently fit them for that awful experiment which will certainly be made. Pass this law, or any such law, and you may pass such a one for every county in the State ; for what reason or justice would there be in denying these inestimable advantages to some which have been extended to others ? Now, sir, what is this system for which we are called upon to say so much, to recommend so strongly ? Is it worthy of such commendation ? How many of us know anything about it, either practically or theoretically ? * * *

Sir, I shall not attempt to expose all the errors, inconsistencies and preposterous absurdities of this pretended system, for several reasons. One is they are entirely too numerous, and the time of this house is too precious to be thus wasted ; another is, as a system, whatever claims some of the remedies used may possess, it is too contemptible to require a general, or to be honored with a grave and serious refutation. But for the information of this house I will notice some of its principles and practice, and expose some of its errors and absurdities.

It professes to be founded on these assumed facts. First, that the human body is composed of four elements, earth, water, fire and air ; that earth and water form the solids, and fire and air give life and motion. Second, that heat is life and cold is death. Third, that all constitutions are the same and all diseases are the same. Fourth, that cold produces all diseases. Fifth, that obstruction produces all diseases. Sixth, that all diseases are to be cured by the same remedy. Seventh, that fever is a friend of the human system and not an enemy. I am well aware, sir, how difficult it is to present these errors, inconsistencies, and absurdities in their true light, even before this intelligent assembly. I know that

there are but few of us who have directed our minds to the investigation of the subject under consideration, who are acquainted with all those established facts, and possess that information, which would at once render these errors, inconsistencies and absurdities apparent. I am well aware that the very name and pretension to simplicity, possesses a talismanic charm, which philosophy and logic do not possess over the minds and opinions of those who cannot understand. To attempt to show the absurdities of this system by logical reasoning, would be in many cases to offer an insult to human understanding and intelligence. As to the first fact or assumption, every intelligent or scientific individual knows that instead of the human body being composed of four elements, the analyzing hand of science has proved to the world that it is composed of almost four times four elements ; that some of those which were once believed elementary principles are compounds, and that others are only the phenomena of matter, or the mere result of life and organization. As to the discovery that heat is life and cold death, the proposition of itself is absurd. If it be meant that heat is the primary cause of life, and if this be so, it is only necessary, to preserve health and protract human existence to an indefinite length, to confine man in a warm and well regulated temperature and give him number six or red pepper. That cold produces all diseases, is another fundamental principle of this system. Cold, undoubtedly, is a very fruitful source of disease, but it is not the universal cause. Heat also produces disease of the most threatening character ; and I have no doubt, sir, that I can kill a patient with heat or steam as soon as a Thomsonian could destroy him with cold or freeze him to death. It is also stated that obstructions occasion disease. This is not unfrequently the case. But I should rather think disease is more frequently the cause of obstructions. Every organ in the human body has a function or duty to perform, and as every organ is subject to disease, when an organ is in a state of disease no rational being can suppose that its ordinary function will not be suspended or imperfectly performed. Sir, the exciting and predisposing causes of disease are too numerous to be here detailed. Every physical agent which operates upon us, as well as numerous others, as the causes of smallpox and cholera, the intimate nature of which are inscrutable, and which we only know by their melancholy effects, produce disease. And, sir, the cause of disease may exist in the human system itself from constitutional defects, and thus the germs of disease are often planted before the first breath of life is drawn. A blow on the head, or the long-continued influence of the rays of the sun, may and will produce an inflammation of the brain. Send for the Thomsonian, he tells you your disease is produced by cold, and, in the delirium occasioned by a violent inflammation, may give you a puke and steam you to expel the cold. Or suppose you have taken powdered glass, or any other agent which from its physical or chemical qualities has occasioned a violent inflammation of the inner coats of the stomach, and what is the remedy ? Why, you are stuffed with cayenne pepper, steamed, and puked to dislodge imaginary canker and cold. This system tells us that all constitutions are the same, and that all diseases are to be cured by the same remedy, and that fever is a friend of the human system, and not an enemy, and, of course, should be

promoted or encouraged, instead of resisted or opposed. That all constitutions are the same, is what no intelligent being can for one moment believe. Sir, human constitutions are as various as human forms and dispositions, and liable to as great a variety of diseases, and require a treatment equally as various. This doctrine of fevers, like many other things in this system, is not new. It prevailed in the very infancy of the medical science, and gave rise to a practice similar to this, and which in many diseases produced the most fatal consequences. The influence of this erroneous theory and similar practices were peculiarly evident in the smallpox ; under a highly stimulating treatment scarcely one half of those who were attacked were saved. But what is the result of the present systematic plan of cure ? Sir, it has been met by science and philosophy, and not one case in ten on an average is now lost. Thus we see, sir, that the very foundation is false, contrary to established facts, and preposterously absurd. What are we to expect of the superstructure ?

Now, sir, let us notice the *materia medica* of this system, or the remediate agents used under those monstrous views of human organization and disease which we have exposed. The principal are, lobelia or Indian tobacco, which is an emetic, and, sir, I have no doubt, a very valuable remedy properly used, and which is or may be in the hands of every physician ; steaming, which, it is well known, is not new, it having been used in domestic practice from the earliest periods, is common to barbarian nations, was found in use among the aborigines of our own country, and, of course, does not exclusively belong to the Thomsonian system ; the bark of the root of bay or myrtle bush, the hemlock bark, white pond lily, peach kernels, raspberry leaf tea, and a few other common, domestic, old woman remedies, the most of which are and have been in use where Thomson's book was never seen ; with cayenne pepper, which, by the by, sir, is the most important remedy of the whole, and enters largely into most of those famous numbers—one, two, three, four, five and six, as well as into almost every prescription.

Then, sir, the principles which we have noticed, the monstrous notions of disease, and these remediate agents, with slander, foul abuse, and misrepresentations of regularly educated physicians and their system, illogical and nonsensical reasoning and preposterous absurdities, mingled with sentiments of atheism and blasphemy, an attack upon the sacred priesthood and religion, and a foul reflection on the female character, which alone would entitle the author to the universal contempt of mankind, constitute this much famed system.

Now, sir, let us see what is the nature of, and what constitutes the regular scientific system of medicine. Sir, it is but the recorded experience of all those who, in every age, have devoted their time and talents to the study and observation of diseases and their cure. It embraces an intimate acquaintance with, or knowledge of, the anatomy of the human system—all the organs which compose it, their connections and relations to each other, their various functions, the laws which govern or regulate their action in health and disease, and the symptoms which denote the diseased condition of each of those organs, so far as has been ascertained ; the history of every disease which is known, their particular symptoms, their origin or cause, their treatment ; the success of the plans or means

which have been used for their cure, with the views of those who gave their history, and the history of all the remediate agents which have ever been known,—no matter where produced or found, whether in the fertile regions of Asia, the highly cultivated soil of civilized Europe, or in the wilderness of our own America—no matter where applied, whether in the gaudy chambers of royalty, or the humble cottage of the peasant—no matter by whom discovered and used, whether by the ignorant, daring, and desperate quack, or by the intelligent, cautious, and conscientious physician. This, sir, constitutes the scientific system of medicine. It is based and founded on established facts, philosophy, and experience. It has been cultivated, and is still cultivated, by such men as Hippocrates, Galen, Hervey, Sydenham, Cullen, Hunter, Bell, Broussais, Laennec, Baudelocque, and our own immortal Rush and Physick, men who have been and are still to be found, in every department of life, whether civil, political, or religious, devoted to the best interests of mankind, studious to better the condition and to promote the happiness of their fellow men, at once among the most useful members and brightest ornaments of society. Sir, it is as wide as the whole range of human knowledge and human experience. It embraces all that is known, or ever has been known, of diseases. It includes in its expanded arms every remedy, whether of the animal, mineral, or vegetable kingdom, that a beneficent Providence has been pleased to bestow on the world, and which experience has proved capable of relieving disease, or mitigating the sufferings of mankind. This, I contend, is the only rational system of medicine.

Now, then, compare this system, founded on established facts, philosophic research, and the experience of five thousand years—each successive generation improving on the attainments of the past, cultivated by men of the brightest genius, most brilliant talents and of moral worth, and conscious of the high responsibilities under which they acted—with the erroneously predicated, absurdly sustained, imperfect system of Thomson; originating with, and perfected by, one obscure individual, who knew nothing of the organization of the human body, who never saw one half of the diseases which afflict our race, or one tenth of the remediate agents which have been found successful in the relief and cure of disease—and decide between them. * * * * *

Sir, it has been attempted to repel the imputation of quackery and empiricism contained in the report. I think I have proved to the satisfaction of every individual in this house, and if I have not, I here assert, on the responsibility of a member of this house, and on my own responsibility as a member of society, without the fear of successful contradiction, that this system is a boastful pretension to what it does not possess, that it affects to teach what its author never understood, and is calculated, under the specious pretension of simplicity and unerring certainty, to impose on a large portion of mankind. And if this does not stamp it with the character of quackery, the common acceptance of the word is incorrect. And, sir, if the entire independence and ignorance of, and contempt for, all past experience, in an author, and the establishment of a system upon his own limited experience, and by mad experiments, entitle it to the character of empirical, this pretended system richly merits

it, and I humbly conceive no one can successfully dispute its claims. It is said that very intelligent and correct men approve of this system, subscribe to it and practise it; and that the terms quacks and empirics are applied harshly to them. Sir, there is no one less disposed than I am to cast reflections and imputations upon, or wound the feelings of individuals; but if they will connect themselves with, and stand forth to support this system, they are liable to the same imputations to which the system itself is obnoxious. It is also said that learned physicians sanction and approve the Thomsonian system, and have decided in its favor. Sir, that any intelligent physician or scientific man that is perfectly sane—however willing he may be to acknowledge that some of the remedies used, and some of the means employed, are valuable, and may in many cases be successfully applied, which I do not deny—can recognize this as a new and distinct system of medicine, perfect in itself, and capable, as it professes to be, of answering all the various indications of disease, and sanction its principles, its falsehoods, abuses and absurdities, I hold to be utterly impossible.

Sir, tell me of the man who is acquainted with the advantages of civilized life, who has felt the genial influence of the light of science, and tasted the pleasures of truly refined society, preferring the destitute, barbarous, and benighted condition of the Hottentot, or of a native of some of the South Sea islands; tell me of the skillful and experienced mariner, who has often seen the ocean wrought into mountain waves by the tyrant storm, and who knows that dangerous shoals and rocks lay hid beneath its surge, throwing away his compass, his quadrant, and his chart, and committing himself to the mercy of the waves and the winds, without a landmark or a beacon to guide his course towards the destined port, over the trackless sea,—but tell me not of any learned physician recommending this monstrous system to the world.

Mr. Speaker, this system professes to be perfectly simple and intelligible to all, to be reduced to the comprehension of the most humble intellect—and all, sir, I would ask, is, for it to be placed in the hands of the public. I feel no doubt that there is sufficient intelligence in this house, if it can be brought to bear on the subject, to compare this system with reason, established facts and experience, and to reject it, as false in its promises, setting up claims and pretensions which cannot be sustained, and, from obvious imperfections, slander, abuse, and indecencies, utterly disgusting.

Sir, in order to give this house some notion of the nature of this system, and the mind and principles of the author, I beg the indulgence of this house to read some extracts from this celebrated work. Sir, I am going to read some of the commencement of his treatise on obstetrics, one of the most important branches of medical science, on a proper knowledge of which not unfrequently the lives of mother and child depend. Thomson says:—"This is a very difficult subject to write upon, as I know of no words that would be proper to make use of to convey the necessary information to enable a person to practise with safety."

And this acknowledgment is true—his system proves in this, as in all other branches, that the author was destitute, utterly destitute of know-

ledge, as well as words, to teach what he professes to understand. A little further on in this treatise, he says :—

“ All the valuable instruction I ever received was from a woman in the town where I lived, who had practised as a midwife for twenty years ; she gave me more useful instruction in an interview of about twenty minutes, than all I ever gained from any other source.”

Now, sir, I ask, what are we to think of a system founded alone on rash and reckless experiment, by a man who acknowledges himself indebted to such a source for all the valuable information he possesses on a subject in which is involved human life and happiness. * * *

Now, Mr. Speaker, in conclusion, I ask the members of this house, this grave and intelligent assembly, whether they are prepared by any act of legislative sanction, to recommend to their fellow citizens and the world, this pretended system of medicine, with all its boasting pretensions, its imperfections and preposterous absurdities, and all its abuse and vile slander, intended to prejudice the mind of the people against the regularly educated physicians, and which I do contend is as much a part of this system, as steaming and red pepper.

Sir, are we prepared to pronounce the experience of all those who have devoted their lives and talents to the study and practice of medicine, for the last five thousand years, under a deep sense of the responsibility under which they acted, entirely worthless ? Are we prepared to usher a host of ignorant, boasting pretenders upon community, without the guarantee that they know even a part of that imperfect system which they pretend to practise, utterly ignorant of the human system and the diseases which affect it, and destitute of every qualification but the proof of having paid twenty dollars for a Thomsonian book ?

Sir, let us pass this bill or any similar one, and we do all this. I am now willing to submit this subject to the intelligence, justice and humanity of this grave assembly, and take my seat.

A CASE OF CROUP.

BY F. A. WILLARD, M. D.

[Communicated for the Boston Medical and Surgical Journal.]

IN communicating to my professional brethren, through the medium of your excellent Journal, the following case of croup, my only object is, to endeavor to draw their attention to a disease, which, after having advanced to a certain stage, is perhaps as little under the control of medicine as tubercular phthisis, and seems to be nearly as great a scourge to children in northern climates as the other is to adolescents.

I was called, March 15th, to visit T— C—, a boy three years old, who had been remarkably healthy up to the time of his present indisposition. I found him laboring under the following symptoms ;— pulse one hundred and thirty, hard, full, quick, and rebounding ; breathing laborious, suffocative, and performed with a kind of hissing noise ; voice shrill, as if the sound passed through a brazen tube ; cough short, dry, and hard ; tongue red, swollen and indented ; skin hot and dry, except

the head and face, which were covered with perspiration from the violence of the struggle ; lips and cheeks alternately pale and red ; laying upon his back ; neck considerably engorged ; head thrown back so as to keep the trachea upon the stretch ; eyes protuberant ; countenance exhibiting great distress ; at times delirious. The above symptoms would seem to announce to the most superficial observer an aggravated case of the croup.

Having only a week previously, lost a patient laboring under similar symptoms and a similar disease, and having gone through the routine of remedies usually applied on such occasions, without any other result than that of relieving for the moment the most urgent symptoms, and perhaps delaying for a short time the fatal termination, I resolved, on being called to this patient, to deviate somewhat from the beaten track, and to follow up a more energetic and persevering course of treatment ; and although the little sufferer finally sunk under the disease, yet it will appear that this result was delayed nine days ; and may we not hope, that, by careful and reiterated observation, we may be able to discover some remedy for a disease which has been, and still is, as much an *opprobrium medicinæ* as any other to which human nature is heir to ?

Sunday, March 15th, at five o'clock, P. M. I was called to visit the patient, and found him laboring under the symptoms as stated above. I directed six leeches to be applied to the lower part of the trachea ; five grains of submuriate of mercury to be given once in three hours ; two drops of Scheel's prussic, or hydro-cyanic acid, to be taken once in four hours ; mild mercurial ointment to be rubbed over the groins ; a warm bath once in six hours ; to be kept constantly nauseated, and occasionally vomited by a solution of tartarized antimony.

March 16th.—Passed an exceedingly restless night, but somewhat relieved this morning ; cough humid ; expectorates a small quantity of coagulable lymph, combined with fibrin or mucus ; countenance exhibits great distress ; pulse continues hard and quick ; four more leeches to be applied to the trachea ; hydro-cyanic acid to be continued ; skin hot and dry ; bath as yesterday.

17th.—The antimony and mercury have operated powerfully upon the bowels, the dejections being of a dark green color ; the inflammatory action much diminished ; expectorates more freely ; a blister to be applied over the upper part of the thorax and the lower part of the trachea.

18th.—Passed a more comfortable night ; expectoration increased, and small films, resembling portions of the membrane, coughed up ; cough less, and more full ; the following draught to be given every five hours :

R. Potassæ Nitratis grana quinque.
Aquæ Menthe pulegii drachmas quatuor.
Vini Antimonii Tartariz. guttas quinque.
Tincturæ Digitalis guttas quinque.
Mucilaginis Acaciæ.
Syrupi Sing. drachmam.

Solution of tartarized antimony to be discontinued ; sinapisms to the feet.

19th.—Much improved ; mercurial fetor observable ; submuriate of mercury and mercurial ointment to be discontinued ; expectoration more

mucous, or rather purulent, combined with scarcely any fibrin or coagulable lymph; pulse ninety-eight, full and soft; desires food.

20th.—Sitting up in bed; slept during half of the night; expectoration copious; skin moist; the engorgement and fulness of the neck have entirely disappeared; respiration free from that peculiar hissing which I believe is always observable in the acute inflammatory stage of this disease; mouth sore from the influence of the mercury; desires food, is allowed thin arrow root, and gruel; much debilitated.

21st.—Slept well; coughs occasionally, and expectorates freely large quantities of thick mucus; is clamorous for more food; warm bath discontinued; skin moist and cool; pulse eighty-nine; the draught discontinued, as was also the hydro-cyanic acid yesterday; much annoyed by the blister. The little patient now appears to be convalescent, and there seems to be nothing remaining of the disease but debility.

22d.—The patient much emaciated, considering the time he has been ill; appetite large; tongue slightly coated in the centre; pulse eighty, soft, and small; a small quantity of æther to be given once in four hours, and the arrow root continued.

23d.—This forenoon, at eleven o'clock, I was sent for in haste, to see the patient, and found him *in articulo mortis*; upon his back; face and lips pale and livid; insensible to surrounding objects; cough short, quick, and suffocative, and these symptoms continued to increase in severity until one o'clock, when he died.

On interrogating the mother, I learned that the patient slept well during the night; that at six o'clock she arose and washed the child's neck and face with cold water; that at about seven, the child was seized with horripilations, soon became "stuffed up," skin became hot, the respiration impeded, and all these symptoms augmented in severity until his death.

I have thus, Mr. Editor, stated, in as condensed a form as I was able, the symptoms and treatment of the disease, and which were noted down in my case book at the bedside of the patient.

Although I am very well aware that it is not customary to record in our journals unfavorable cases, yet it appears to me that where there is in them anything that is novel, they should be unhesitatingly and ingenuously made known.

Charlestown, April 27, 1835.

CHRONIC APHTHÆ.

To the Editor of the Boston Medical and Surgical Journal.

SIR,—On page 420, Vol. XI. of your practical Journal, is a notice of the effects of *Secale Cornutum*, by Dr. Jonathan Swett. He ascribes a disease called Chronic Aphthæ to its administration. I have seen a similar affection to the one described, in cases where no ergot had ever been exhibited. I would therefore respectfully inquire of Dr. S. if he can throw more light on so important a subject. I should be pleased to see a full account from him of the disease in question, and also the proper treatment. I should be pleased, also, to see from any of your corres-

pondents a full account, in a practical form, of chronic aphthæ, aphthous diarrhœa, its pathology, diagnosis, prognosis and treatment.

I should likewise be pleased to see dissertations on inveterate dyspepsia.

Respectfully yours.

W. A. GILLESPIE.

Louisa Co., Va., April 18th, 1835.

BOSTON MEDICAL AND SURGICAL JOURNAL.

BOSTON, MAY 6, 1835.

EFFLUVIUM FROM DEAD ANIMAL MATTER.

A TRIAL has recently taken place before the Mayor and Magistrates of the city of Norwich, England, involving a question which has been much disputed both in Europe and this country, and which has received some attention in former volumes of this Journal—viz. whether *decomposed animal matter* is prejudicial to health. The trial was for a nuisance alleged to arise from the burning of bones on the premises of the defendant, who was a comb-maker and bone-merchant, and is principally interesting from the diversity of opinion which was elicited in regard to the subject referred to, both from members of the profession and other witnesses. Of the non-medical witnesses for the prosecution, who resided in the neighborhood, one deposed that he was obliged to have his doors shut to keep out the "horrid stench," and that his wife was ill during nearly the whole of the two years of her residence there; another, that he with his family removed from the neighborhood on account of "the nauseous sickness which they experienced from the bone-yard;" and seven others to the same effect. Of those for the defence, one said that "he liked the smell *very well*, and that it did not incommode him,—it was something like pea-soup in summer;" another, that the smell was no nuisance to him—it was not pleasant, but he did not mind it; the testimony of others was similar.

The medical evidence was quite as contradictory as the preceding. Mr. Hall, surgeon, considered the smell arising from putrid flesh and bones, and from the boiling of them, to be *very unwholesome*. It was likely to produce an affection in the bowels. He attended Mrs. Harmer, who was very feeble while she resided in the neighborhood, but had been better since she left the house. Such smells would be injurious to persons in her state. Decomposed animal matter was, in his opinion, more injurious than vegetable matter.

Mr. Johnson, surgeon, also considered the smell from putrid bones *very injurious*, especially in consumptive cases, and rendering persons more liable to attacks of contagious diseases.

Dr. Ash considered the effluvium of putrid bones *decidedly injurious to the public health*. He never heard a doubt on the matter from any one who had not a pecuniary interest in denying it.

Mr. Gowing, surgeon, believed such smells *injurious to health*; they predisposed to disease, by destroying the digestive functions.

Mr. Nichols, surgeon, for the defence, deposed that the defendant's trade was *not*, in his judgment, *at all prejudicial to health*. The effluvium would at first produce disorder of the digestive functions; but the contin-

ual exposure to it was rather conducive to health than otherwise. The decomposition of vegetable, was worse than that of animal matter, because the latter emits a greater quantity of ammonia, which is rather *beneficial to health than otherwise*. His opinion was in accordance with the best works on the subject, and the opinion of the *best* medical practitioners.

Mr. Stark, chemist, said that his opinion was that all persons breathing the effluvium from animal decomposition were *exempt from epidemical diseases*, and not so liable to infectious or contagious diseases as others. During the rage of the cholera here, as well as in London, and, he believed, everywhere else, not a single butcher, or other person constantly in animal effluvia, was attacked. Of 320 persons sent to the Leeds Fever Hospital in 1821, not one belonged to any of these trades.

The report of the speeches of the counsel does not show that they contained any references to medical opinions, and the jury, after some deliberation, returned a verdict of "not guilty of a public nuisance."

The subject of animal and vegetable effluvia is a deeply interesting and important one to all classes of the community, especially to the inhabitants of our large cities. The contradictory opinions above recorded will, we trust, have a tendency to draw the attention of physicians to a question so unsettled as this, and induce more thorough investigations.

It will be fresh in the recollection of our town readers, that the city of Boston was indicted in 1832, for an alleged nuisance, in allowing an accumulation of offals from yards near the public stables, and were compelled by a course of law to empty the city carts, in future, out of the precincts of the city. By contract, the offals were then delivered on the premises of a man in Roxbury, who fed a vast number of hogs. The selectmen of that town made an objection to receiving within their boundaries anything which had been declared by the physicians prejudicial to the public health of Boston, and hence that dépôt was necessarily abandoned, and the whole is now carried to West Cambridge. In the mean time we have no recollection that any individual was positively made sick in consequence of its presence.

Medical men among us have usually regarded putrid animal remains with less fear than vegetable matter in a state of decomposition. Many cases might be cited to show that alarming diseases have been produced by both; and as many more, exhibiting, in the clearest manner, that no bad results were produced by exposure to either, even when the weather was most favorable for disengaging those noxious gases the most intolerable to the olfactory organs.

To sum up the whole, however, we are inclined to the opinion that neither vegetable nor animal matter should be permitted to accumulate in the neighborhood of a dense population, because all experience proves that under a combination of circumstances poorly understood even by chemists, the atmosphere is sometimes suddenly poisoned by their fetid exhalations, and the vital energies of the strongest man are prostrated by their secret, irresistible power.

Hospital for patients suffering from the Stone.—It is somewhat singular that a hospital should have been in existence two whole years, in London, for the reception of this particular class of sufferers, and yet we know nothing about its internal police or external management, till within a few weeks—when it is announced that the loss is, on an average, one case in four. M. Castello, formerly a co-partner with M. Civiale,

is at the head of the establishment. In the London hospitals, the annual number of operations for the stone amounts to forty-seven; and in all England and Wales to about sixty-seven. In a population of twelve millions, the average yearly cuttings for stone is one hundred and eleven—being in the ratio of one case, only, for every one hundred and eight thousand persons.

Medical Moonshine.—The Parisian disciples of Hahneman, universally known as homœopathists, on the 27th of January last applied to the Minister of Public Instruction, requesting authority to establish a dispensary, and afterwards a hospital, provided they could obtain the wherewithal to treat the sick upon true principles—as, for example, giving one drop of water from a hogshead in which the millionth part of a grain of ipecac had been steeping. The minister consulted the Academy, who chose a committee to answer the question—Shall it be approbated? We shall give the result as soon as it comes to hand. The founder of this absurdity of all absurdities, the ever-to-be-remembered Dr. Hahneman, at the advanced age of eighty-four, was married, on the first week of February last, to a young French woman.

Arsenic.—Dr. Strohmayer, in his *Medicinische Praktische*, relates, in exemplification of the extent to which the system may become accustomed to the operation of arsenic, that a peasant, who resided near a convent in the Tyrol, for a long time took ten grains of arsenic daily with his food. The inmates of the convent fully testify the truth of this statement.

A Caution to Practitioners.—Dr. Thomson, an English physician, very justly lays down the following rules, regarding professional intercourse with smallpox patients. In all cases of infectious diseases, the physician should examine the sick person, standing on the windward side of the bed, and wash his hands as soon as possible after the visit.

Good Health.—If ever there was a period of universal good health, in New England, this is the time. No epidemic is known to exist; the bills of mortality have been unusually small, and physicians, though nearly out of employment, cordially unite in the general expression of thankfulness to a kind Providence.

Cæsarean Operation.—The Norfolk Beacon states that the delicate and often fatal Cæsarean operation has recently been performed by Professor Gibson with perfect success, being the first time, the Beacon intimates, that the operation has ever proved successful in this country. Thirty days had elapsed at the date of the notice in the Beacon, and both mother and child were doing extremely well. A full report of the case will be prepared for the Medico-Chirurgical Review.

TO CORRESPONDENTS.—Medical Reflections, No. 4—Remedies for obstinate Hiccough, from two correspondents—and Remarks upon the Deaf and Dumb, are unavoidably deferred another week.

Whole number of deaths in Boston for the week ending May 2, 27. Males, 19—Females, 8.
Of hooping cough, 1—infantile, 3—lung fever, 4—scrofula, 1—fits, 1—influenza, 1—dropsy on the brain, 1—stoppage in the bowels, 1—unknown, 1—drowned, 1—debility, 1—intemperance, 1—bleeding at the lungs, 2—teething, 1—consumption, 2—scarlet fever, 1—inflammation in the liver, 1—inflammation in the head, 1—insane, 1—dropsy, 1.

Record of Meteorological Observations for April, 1835.

1835 April	THERMOMETER.			BAROMETER.			Appearance of the Atmosphere	Wind	Rain	Memoranda, &c.
	Min.	Max.	Mean	Min.	Max.	Mean				
Wed. 1	36.50	51.00	45.25	29.60	29.70	29.650	Cirrus	NW		
Thur. 2	34.00	48.00	43.00	29.75	29.80	29.775	Cir. c. strat.	"		S E, a.
Frid. 3	38.00	45.00	41.50	29.80	29.90	29.850	"	NE		Stratus, a.
Satur. 4	37.00	40.00	38.50	29.60	29.85	29.725	"	NW	1.35	Rain, NE and stratus m.
Sun. 5	35.00	36.00	36.75	29.50	29.80	29.650	"	NE	.80	Rain. Th. 37° 50 at 9h a.
Mon. 6	40.00	53.00	46.50	29.38	29.50	29.440	"	"	.02	Rain & hail, a. p.m.
Tues. 7	38.00	51.00	44.50	29.32	29.38	29.350	Cumulus	NW	.08	SE and cir. c. strat. m.
Wed. 8	36.00	54.00	45.00	29.50	29.65	29.575	Cumuli	"		
Thur. 9	42.00	66.00	54.00	29.65	29.75	29.700	"	SW		
Frid. 10	41.00	52.00	46.50	29.90	30.10	30.000	Cirrus	NE		Stratus, m.
Satur. 11	38.50	48.50	43.50	30.15	30.25	30.200	"	SE		Stratus, m.
Sun. 12	35.00	51.00	43.00	30.08	30.23	30.155	"	"		
Mon. 13	40.00	50.00	45.00	29.70	29.93	29.815	Cir. c. strat.	"	.20	Rain, SW, a. a.
Tues. 14	37.00	43.00	40.00	29.60	29.75	29.650	Cumulus	NW		Algae
Wed. 15	27.00	48.00	37.50	29.90	29.90	29.900	Cumuli	"		Gale continues
Thur. 16	37.00	33.00	35.00	29.45	29.80	29.625	Cir. c. strat.	NE	.50	Gale. Snow and rain
Frid. 17	30.00	36.00	31.00	29.50	29.85	29.675	Cumulus	NW		Th. 26 at 9h a. Gale con.
Satur. 18	22.00	37.00	29.50	30.05	30.10	30.075	Cumuli	"		Gale continues
Sun. 19	26.00	46.00	36.00	29.85	30.25	30.050	Cir. c. strat.	SW	.05	Rain, a. a.
Mon. 20	50.00	56.00	53.00	29.35	29.60	29.475	"	"	.10	Rain
Tues. 21	40.00	52.00	46.00	29.70	29.82	29.760	Cirrus	NW		
Wed. 22	41.00	52.00	46.50	29.75	29.80	29.775	Cir. c. strat.	SW	.08	Rain, a.
Thur. 23	38.00	52.50	45.25	29.75	29.90	29.825	Cumulus	NW	.02	Rain, m.
Frid. 24	37.50	50.00	43.75	29.90	30.05	29.975	"	"		
Satur. 25	33.00	35.00	34.00	30.00	30.12	30.060	Cir. c. strat.	SE	.75	Stratus, m. Snow & NE
Sun. 26	32.00	49.00	40.50	30.00	30.00	30.000	"	NE		
Mon. 27	33.00	52.00	42.50	30.02	30.12	30.070	Cirrus	E		SE, m. a.
Tues. 28	38.00	45.00	42.50	29.15	29.60	29.375	Cir. c. strat.	NE	.45	Rain, m. SW, rain and
Wed. 29	37.00	60.00	48.50	29.75	29.95	29.850	Cumulus	W		[NW, a.
Thur. 30	43.00	61.50	52.25	29.95	30.00	29.975	Cir. c. strat.	SW		Cumulus, a.
Aggreg.	36.58	48.50	41.225	29.72	29.87	29.8000	Cir. c. strat.	NW	4.40	

RESULT.—Mean temperature, 41.225; maximum, 9th, wind SW, 66.00; minimum, 18th, wind NW, 22.00; greatest daily variation, 9th, wind SW, 24.00; least daily variation, 5th, wind NE, 1.50; range of thermometer for the month, 44.00; increase of mean temperature from March, 9.863; prevailing atmosphere, cirro-cumulo-stratus (cloudy). Prevailing wind, NW. Mean atmospheric pressure, 29.8903; maximum, 11th and 19th, wind SE and SW, 30.25; minimum, 28th, wind NE, 29.15; greatest daily variation, 28th, wind NE, 0.45; least daily variation, 15th, wind NW, 0.00; range of barometer, 1.10; decrease of atmospheric pressure from March, 00.1535; rain, &c. 4.40 inches.

Comparative with April, 1834.—Mean temperature, 45.475; maximum, 79.00; minimum, 29.50; prevailing atmosphere, cloudy. Mean atmospheric pressure, 29.9945; maximum, 30.65; minimum, 29.20; rain, 3.27 inches; prevailing wind, NW.

Fort Independence, Boston, May 1, 1835.

B.

ADVERTISEMENTS.

PHILOSOPHICAL APPARATUS.

JOSEPH BROWN, of the late firm of BROWN & PEIRCE, 87 Washington Street, up stairs, manufactures and keeps constantly for sale, a large variety of apparatus, illustrative of the different departments of science, as Mechanics, Hydrostatics, Pneumatics, Electricity, Galvanism, Magnetism; Optics or Models of the Eye, and Acoustics or Models of the Ear, two beautiful pieces of apparatus (devised by J. V. C. SMITH, M.D.), of great worth to the medical student and anatomical lecturer. All the above articles are manufactured of the best of materials, and in a thorough manner.

Models of the Eye and Ear may be seen at the office of the Medical Journal.

Boston, May 6, 1835.

3t.

WILLIAM WILEY, of Baltimore, manufacturer of Cutlery and Surgical Instruments, No. 23 Water Street, Boston. All kinds of instruments ground and repaired.

3t.

VACCINE VIRUS.

PHYSICIANS in any part of the United States may hereafter be furnished with pure vaccine virus, by addressing the editor of the Boston Medical and Surgical Journal—involving one dollar. Letters must be post-paid, or they will not be taken from the Post Office. The virus will invariably be sent by the first mail, unless some other mode of conveyance is directed. Ten charged quills, an ample quantity for meeting any sudden emergency, and certainly sufficient to propagate a supply from, will be securely packed in a letter. The gentleman who has undertaken to keep the virus, will faithfully supply that which is positively genuine and recently taken.

Boston, March 4, 1834.

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